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THE FARMER.

SATURDAY, APRIL 6, 1833.

Mr. J. BUEL, of Albany, has, at our solicitation, consented to aid us in the Editorial department of the Farmer, so far as his other avocations will permit.

ROOT CULTURE.

I know of no practice so likely to increase the profits of our husbandry, as an increased attention to the culture of root crops, as the potatoe, turnep, mangel worzel, carrot and parsnep. Roots form a desirable crop in alternate husbandry, with the grains and grasses, and are an important article in the economy of cattle husbandry. It is now fully admitted, that crops which do not ripen their seeds, exhaust the soil much less than those which do. Hence roots, from this cause, as well as from their penetrating the ground, and breaking and pulverizing the soil, are denominated ameliorating crops. They leave lands in excellent condition for wheat and barley, and grass seeds. The fair average of these crops, under good husbandry, may be stated as follows:—Potatoes 300 bushels, and the others from 600 to 1000 bushels, to the acre. We have heard of 70 tons, or about 23,000 bushels, to the acre, of ruta baga and mangel worzel. If these are not extravagant stories, they are extraordinary crops. Yet on a moderate calculation, a crop of these roots will go much further in feeding and fattening farm stock, than a crop of any coarse grain from the same area of ground. Some of them may be cultivated with as little expense, and are all of them less prejudicial to the soil. Another consideration which recommends them is, that during our long winters our domestic animals become tired of, and do not thrive upon dry food, and sensibly improve in health, flesh and milk, if partially fed with green and succulent food.

The great objection to the carrot and parsnep, as field crops, are the expense of hand weeding and nursing them during the long period of their infancy, and the labor of harvesting them, which can only be well done with the spade. The first objection applies equally to the mangel worzel, which, like the others, requires to be sown early in May, though the crop is gathered with far greater facility than the other roots. The potatoe is comparatively diminutive in product, and is expensive in the harvesting process. On the the whole, public opinion, in Europe as well as with us, seems to be divided, between the ruta baga and mangel worzel, as to which is the most profitable crop. Perhaps each may be entitled to a preference upon soils adapted to their respective habits: the Swede preferring a lose or sandy and rich soil—the Beet being equally at home in a tolerable stiff loam.

According to Davy, these roots yield nutritive matter in the following proportions:

The Potatoe	200 to 206	parts in 1000.
" Beet	136	do.
" Parsnep	99	do.
" Carrot	98	do.
" Swedish Turnep	64	do.

These results verify the homely adage, that "*the proof of the pudding is in the eating*," or that practice is paramount to theory. Every farmer who has fed these roots knows that there is no great difference in their fattening properties. I lately sent you the result of Mr. Hawden's experiments* in feeding twenty odd bullocks upon potatoes, turneps and mangel worzel, in which it is demonstrated, that turneps produced more meat than either the potatoes or mangel worzel. Separate beasts were fed with an equal weight of one kind for sixty days. I will not pretend to reconcile this discrepancy between theory and practice, otherwise than by observing, that the potatoe may not assimilate so perfectly in the stomach of the animal, in its raw state, as the other roots do, and that a portion of the nutriment is voided. The same food, besides, is beneficial, in different degrees, to different animals. The potatoe, in its raw state, is far more serviceable to the ox and the horse than to the hog.

If we compare the ruta baga and mangel worzel, we shall find the expense of seed about four to one, and of planting and culture three to one, in favor of the first; which possesses the further advantage of being a fine table vegetable, particularly from January to June, and of commanding a fair price in market for this use. The mangel worzel is sown the last of April or early in May, at the rate of four to six pounds of seed to the acre, requires to be sown by hand; and the care of the crop till July, when the turnep is sown, is extremely tedious and expensive. From half a pound to a pound of ruta baga seed is sufficient for an acre; and as it is sown the first of July, when vegetation is rapid, the culture is comparatively trifling. The seed is put in with a drill barrow at the rate of four acres a day, with one man only. The cultivator, or horse hoe, and a proper turnep hoe, greatly lessen the expense of cultivating either of these crops. The turnep is least exhausting, because it occupies the ground the shortest time. I should think the difference in the expense of seed and culture of the two roots would be at least ten dollars per acre. The turnep is easily kept in winter, does not become pithy, and may be fed in good condition till June. These last properties are also ascribed to the mangel worzel, but whether truly or not I am unable to say. B.

The inhabitants of Northampton, at a town meeting, resolved to instruct the Selectmen not to approbate any persons as retailers of ardent spirits in that town, excepting practising physicians.

[* The article alluded to has been received, and will be published soon.]

PHYSIOLOGICAL MEMORANDA.

Extracts.—"When a portion of the stem of a tree is excluded from light, as is sometimes done in planting, *when the tree is placed deeper in the soil than it stood before transplanting*, the green color is destroyed in that part of it which is covered with the soil, and which in course of time assumes the color of the root; and, if much moisture exists in the soil, and the tree be not young, the bark so covered decays, and the tree dies. Should the soil be dry, however, and the plant young, the bark in question is gradually converted into root bark; during this conversion of the stem-bark to that of the root, the plant advances but little, if any, in growth, but exhibits an unhealthy appearance by the paleness of its leaves, and the weak growth of shoots. The same effects are in a degree observable from the opposite error of planting too shallow, which is when a portion of the root next the stem is left above the ground. This exposed portion of the root-bark in time gains the green color in its parenchyma; and although no portion of it is ever found to decay, yet, for a time, the plant makes but little progress in the growth of wood: if a fruit tree, the effect appears to be *to increase the formation of fruit buds*, and to increase the functions of the tree to bear fruit. It may not be devoid of interest to remark here, that *this is a more efficacious mode of inducing a free growing*, though barren tree, *to produce fruit*, than any of those recommended for that purpose, such as *ringing, &c.*"—*Useful and Or. Plant. p. 7.*

"The bark covers the wood in every part of the tree, and is the most important organ of vegetable life; for the pith may be lessened, the wood may be partially or even wholly taken away, and the leaves may be stripped off, and yet the tree may recover; but when deprived of its bark, the root, stem or branch of a tree dies. It is therefore of the greatest importance to the practical planter, that the bark of the roots and of the exposed system of his plants should be preserved free from the slightest injury."—*Ib. 5.*

"The leaves of trees being the great organs for elaborating the sap, and fitting it to become converted into all and every product of the tree, whether timber, bark, seeds or fruit, render the facts relating to their functions and structure of high interest to the planter; for they point out the danger of lessening their number beyond a certain extent, as in excessive pruning, or of suffering the leaves to be crowded too much, so as to exclude a free admission of light and air, as happens when trees are planted too close together, and judicious thinning and pruning are neglected."—*id.* 13.

Abstract.—"*Farinaceous* seeds, covered with shells, as those of the oak, Spanish chestnut, beech, horse chestnut, walnut, hazle, hornbean, plane, sycamore, maple and ash, lime, &c., from the farina they contain, are least adapted to keeping out of the soil; and the same cause renders them more difficult to preserve in the soil when sown, by inducing the attacks of birds, mice and other vermin. The spring is considered the best season for sowing, and the seeds must be preserved therefore carefully during the winter; the

most approved mode is to spread them out in thin layers on a cool dry floor, being previously dried by the sun and air. When sown, the large seeds should be covered with two inches of earth; the small ones, as the maple, ash, &c., may be mixed with an equal quantity of earth, the mixture laid upon the ground a foot thick, and covered with an inch of mold. *Remark.*—I have sown the plane, soft maple and elm seeds in May, as soon as they fell, and they have grown immediately.

Hard seeds, as the cherry, mountain ash, peach, plum, crab, thorn and pear, with the exception of the first, lay one or two years before they vegetate, unless the shells are broken by the operation of the frost, or by artificial means. They may be mixed and covered with earth as directed for farinaceous seeds, and sown in seed beds after they have been subjected one winter to the operation of the frost.—*id.*

EXPERIMENTS

ON THE CULTURE OF SQUASHES AND MELONS.

About three years ago, having a surplus of stable manure in the garden, I had it formed into a narrow ridge, about two feet high, and then covered over to the depth of three or four inches with common soil, in the same manner as we bury turneps and potatoes. This was intended as a preparatory step towards converting it into compost; but afterwards finding no suitable spot in any other part of the garden for *squashes*, I concluded to let it remain undisturbed till autumn, and put in the seeds at proper distances, singly, along the top of the ridge. The plants were the most productive that I had seen in many years.

Last spring we carted *yellow pit-sand* from a depth of two or three feet, into the garden; and after mixing with it a liberal portion of the scrapings of the barn-yard, it was made into a sharp ridge about two feet in height, for sweet potatoes. Not having sprouts enough to plant the whole however, a part remained unoccupied. It so happened that a package of rare seeds, generously sent me by a distant horticulturist, and which had been detained on the way, arrived a month after the usual time for planting; and among these were two rare kinds of *squashes*. As this ridge was the only ground that I had unappropriated, I planted the latter seeds on its top. The growth was most remarkable, and I have never seen squashes on the richest alluvial soils that equaled them in luxuriance.

Although in *both these cases*, the supply of manure was plentiful, yet I ascribe much of my success to the plants *growing on a ridge* from which the surplus water in rainy weather, could rapidly pass off. In a former paper,* I have spoken of the advantages of planting melons on ridges; and some time in the last summer, I saw an article written by my friend Richard M. Williams, who had anticipated me in this mode of culture. But whoever may have the *honor* of the first discovery, we who follow in a track so judiciously marked out, may have quite as much *profit*; and I recommend this method of raising melons and squashes to all who have to cultivate *heavy loams*. As his remarks have not yet appeared in the Genesee Farmer, I will take the liberty to make some extracts:

* American Farmer, Vol. 13, page 341. Genesee Farmer, Vol. 2, page 48.

"About the year 1802, I had some grounds ridged for sweet potatoes; when about to plant, my foreman asked me for some water melon seeds; I gave him about a gill, which he distributed among the planting hands, directing them to plant one seed once in about a rod, near the top of the ridge.

"These vines grew and flourished astonishingly, producing from four to six melons each, most of which were three feet long, and from six to nine inches in diameter, of very fine flavor, and sold readily at the Savannah market from 62½ to 75 cents each, so that I received about $3 75 from each vine.

"The same season, I took unwearied pains to prepare about an acre of ground, which I directed to be planted *on a level* in the Yankee fashion. My foreman, Old Tom, told me, "*him no do massa, him all spoil;*" in fact I never scraped five dollars profit from the whole acre. The sun and rain spoiled the whole of them.—My cow yard contained about a quarter of an acre; I *ridged* about half of it, and planted it with water melons; from this small patch I sold rising of 75 dollars worth of melons. The patches were all planted from the same seed, and the soil was clear sand."

It appears then that this method has been long practiced by the negroes in Georgia. About fifteen years before the period alluded to, a near neighbor of my father's had *the finest water melons that he had ever raised*, owing to the following circumstances: A heap of dark gray sand from the river, had been left in the yard—a remnant not used by the masons; and into this, either by design or accident, some of the children had put the seeds. It does not appear however, that any further advantage was taken of this unexpected and successful discovery. D. T.

Greatfield, 3 mo. 27, 1833.

BOOKS FOR FARMERS.

My worthy cousin, *Quercus*, of the *Oaken* family, introduces to our acquaintance the *Farmer's Series* of the "Library of Useful Knowledge." I hope he will gratify us with occasional extracts from it, which may be of service to the readers of this paper. When I go again to New-York, I shall examine the work, and if I approve, shall purchase it. But to tell the truth, I am a little shy of these European publications. I have seen many of them containing various treatises on agriculture, domestic animals, &c. from which our American people can obtain but little good.

England is so different from our country in most particulars relating to her agriculture, owing to the great difference in the value of her labor, density of her population, value of her soil, and humidity of climate, together with many other important particulars; that few of her observations, customs and habits of her agriculture, will apply to that of our own country with advantage. Hence it is that many English farmers, on arriving in our country, have to adopt altogether a different course of operation from any they have ever before pursued. Our domestic animals are treated altogether different from theirs. Our culture is also in most cases quite different from theirs; and therefore their publications, except those that relate barely to general and scientific principles and details, are of little practical use to us. Even the style of building in the two countries is so different, that we can learn little of them. In that particular, I think we have an evident advantage over them, in the material for our farm establishments. But in many things they vastly excel us. It would be greatly to our advantage to adopt their neat, pretty manner of cottage ornament, with yards and shrubbery around the dwellings of the laborers and poorer classes; and their close economy in spending their provisions for their families, and the food for their domestic animals and stock, might be advantageously imitated by us. In many of these particulars, no doubt English books might be studied to much advantage. Selections might be made of great practical utility, while as a whole their works are not generally profitable to us.

It is much to be regretted that we have so few practical authors in our own country on these subjects, and that nearly all our books must be borrowed from England. If one tenth part of the time and study were spent by the writers of our country in getting up valuable practical works on agriculture, domestic economy and rural improvements, that is wasted in inventing and purloining the miserable trash annually worked up into fashionable novels, and thrown off upon our community, what a vast contrast would our country present to what it now is! But in this *our people* are mostly to blame. These works are not patronized. Our farmers will not purchase and read those books most for their advantage; and what little labor is spent in getting up valuable works on agricultural subjects, is often so poorly paid as to fatally preclude any new attempt of the kind.

Two years ago, one of our enterprising booksellers in Buffalo brought out a dozen or two of Fessenden's American Gardener, an invaluable work to any person possessing an acre of ground; and although often advertised, he yet has them half on hand. It is in truth no wonder that our people know so little of that which most concerns them. I do hope, however, that the times are mending, and that the period is not far distant when our farmers will no longer be ignorant of the science of their profession; that your one hundred correspondents shall have increased to one thousand, and your one thousand subscribers to ten thousand. What a paper might the Genesee Farmer then be!

It is with great pleasure I observe our State Agricultural Society have petitioned the Legislature to establish an Agricultural Institute. May their efforts be successful! Our Buffalo Lyceum early petitioned that body this winter on the same subject; and every Lyceum in the state ought to do it. Our Legislature will do nothing in the matter until they are driven to it by the strong voice of the people. They are too full of politics and office. When the people know enough to send men to make laws, who are intimate with the best interests of the community, then may we expect something done to raise our agricultural interests, and not before. ULMUS.

☞ The communications of *S. Griggs* and *Hickory* on the plan for the proposed Agricultural School, are deferred for the present, as the subject will not, we learn, be acted upon at the present session of the Legislature, and the discussion of the question will be in season at any time between this and the next fall.

"*Swift as a flash!*"—By a new arrangement of the steamboat and stage lines, a traveler may leave Albany at 5 P. M. and be in Baltimore next evening at 11!

IRRIGATION.

The advantages of irrigating land, especially grass land, are not unknown; still it is very generally neglected. Most farmers know the benefit of turning the water from the road side upon their mowing lots, and yet they will suffer the permanent streams that run through their farms to pursue their natural courses, without ever diverting one drop into artificial channels to fertilize and enrich their fields. True, that in a country as level as western New-York, much less advantage can be taken of streams, than in a country abounding in hills. Yet there are hundreds of farms in Monroe county, that might be greatly improved by judiciously diverting the streams from their accustomed courses, and hundreds of tons of hay might be added, with very little expense, to the annual crop.

In the hilly country of Vermont, I owned a farm, over which I carried the water of a small stream in artificial channels, more than a mile. Lands, that did not yield half a ton to an acre, were thus made at once to yield two tons; by which means I added to my crop six or eight tons. A little experience taught me that I could carry water where I had not the least suspicion it could be carried. Every stream that runs with any rapidity, may be used for this purpose.

For the benefit of farmers, I will state my method of proceedure. I first selected the place at which I thought best to take the water from the stream. Here I made a dam sufficiently high to conduct the water into a channel on the bank. The dam may be made of wood or stone, as is most convenient, but stone are best, as they are most durable and less liable to be washed away. I then drew two furrows with a plow, turning the sod down toward the stream, and pulling the sods of the second furrow upon the top of the first. This will make a channel sufficiently large for ordinary purposes, where you do not wish to carry the stream to any great distance.

These channels should be drawn as nearly level as they can be, and give a current to the water. Most farmers draw them merely by judgment, and of course very inaccurately. I had an instrument to which was attached a spirit-level, so that I could lay them with great accuracy.

But any farmer can make an instrument in fifteen minutes, that will answer the purpose very well. Take a piece of plank five or six inches square, through this bore a hole to receive a staff about three feet long sharpened at the lower end, to stick into the ground. This is used as a standard, on which you must lay a smooth plained ed board about a foot square.

The method of using it is this. Place your standard below your intended canal, so that the top will be level with your dam, or the place where you design to take the water from the stream. Then turn water upon the top of your board, and so adjust it as to bring it to a level, or a little descending in the direction that you wish to draw your channel. Then with your eye look across the top of your board, and see where it strikes the ground. Here place a boy with a hoe to make a mark in the sod; and let him go on and make these marks as you direct, once in a rod, and oftener if the ground be very uneven. Thus go through the whole extent that you wish to make your channel.

Then with your plow draw your furrows through these marks, being very careful not to fall below them, or go above them. A little care in drawing the furrows will save much labor in making the channels. If not drawn with accuracy, it will be necessary to sink the channels in some places, and to raise the banks in others.

From these channels the water will percolate, and fill the ground below them; and you may, in as many places as you see fit, let it overflow the bank and spread on the surface. A better way is to set boards in the bank, with an auger hole for the water to flow through it in such quantity as you may wish.

Even small streams, that fail early in the summer, may be of great use, because if the ground be well saturated with water in the spring, it will give the grass a start, and if it be well watered on the first of June, it will not suffer from drouth before the crop is matured.

On the subject of irrigation, I have learned much by experience, and am so confident that thousands of dollars might be added to the annual produce of our fields, that I feel desirous to see this improvement in husbandry more generally introduced. Any thing that I can do to aid my fellow citizens in such improvement, would give me pleasure. E. D. ANDREWS.

Pittsford, March 20, 1833.

SUGAR FROM BEETS.

Mr. Editor—I find several notices in the Genesee Farmer regarding beet, and the manufacture of sugar from it, but not such specific directions for managing the process as would enable a beginner to proceed with confidence in making a first experiment. Being a constant reader of your valuable paper, I will be much obliged if you, or any of your correspondents, who have *practical* knowledge on that subject, will answer the following queries:

1. How long may the juice, after being expressed, remain in the tub before being put into the boiler?

2. Should it be boiled quickly, or by a slow fire, and how long?

3. What quantity of lime should be added to each gallon of juice?

4. Must the lime be quick or effete?

5. Is it put into the boiler at the time of putting in the juice, or while it is boiling, or after being boiled?

6. What are the signs, if any, by which we can know that the syrup is *sufficiently* concentrated?

7. What length of time must the syrup stand to settle? To effect this, must it remain in the boiler, or be put into a cooler?

8. One of your correspondents, Vol. 1, p. 314, says: "After which, [settling,] the clear syrup is decanted, and if any lime remains in solution, a small quantity of sulphuric acid is added." How much of the acid to a gallon of the syrup? What sort of vessel should it be decanted into?

9. The correspondent above alluded to directs that the syrup be boiled again, "until it is *sufficiently* concentrated to crystalize." By what means is this sufficient concentration to be discovered?

10. When crystalization is induced, is the syrup put into deep or shallow vessels, to be dried down as brown sugar? D.

METEOROLOGICAL TABLE.

KEPT AT ROCHESTER, FOR MARCH, 1833.

	10 A. M.				10 P. M.			
Days.	therm.	barom-eter.	winds.	sky	therm.	barom-eter.	winds	sky
1	25	29,50	E	cloudy	20	29,40	N E	cloudy
2	2	29,60	N W	do*	2	29,65	N W	fair
3	14	29,40	W	do	16	29,30	W	cloudy
4	12	29,70	S W	do	10	29,90	N E	do
5	22	29,90	W	fair	16	29,45	S W	do
6	24	29 45	S	cloudy	22	29,60	N E	fair
7	34	29,40	N E	fair	31	29,25	S E	cloudy
8	35	29,25	W	cloudy	27	29,35	N E	do
9	33	29,30	N E	fair	37	29,35	W	do
10	30	29,60	E	do	22	29,65	N E	fair
11	38	29,60	N W	do	40	29,55	S	do
12	40	29,50	N W	do	28	29,60	N W	cloudy
13	25	29,70	S	do	22	29,85	N W	fair
14	32	29,80	N W	do	32	29,50	S	do
15	36	29,75	S E	do†	38	29,85	N W	do
16	36	29,85	E	do	32	29,95	E	do
17	44	29,75	S W	do‡	44	29,65	S E	do
18	49	29,55	S E	do	49	29,55	S	do
19	59	29,50	S E	do	55	29,40	S	do
20	63	29,25	S	cloudy	68	29,20	S E	cloudy
21	63	29,10	N	do	50	29,05	W	do
22	48	29,15	W	do	39	29,40	W	fair
43	50	29,50	S W	fair	42	29,40	W	do
25	48	29,20	W	do	46	29,15	N W	cloudy
22	42	29,20	N W	cloudy	30	29,30	S W	do
26	32	29,40	N	do	28	29,55	N W	fair
27	34	29,65	N	fair	30	29,65	N	do
28	32	29,70	N W	do	31	29,50	S W	do
29	40	29,45	S W	do	35	29,45	S W	do
30	42	29,55	W	do	44	29,55	W	do
31	60	29,55	W	do	50	29,55	W	do

Means, ther. 35°, bar. 29,50, snow 7 in rain 1-10.
* Therm. 4° above zero, sun rise. † Spring water 36°. ‡ Sleighing gone.

Since the 8th, the month of March has been one of uncommon mildness. Buds are on the eve of blossoming, and on a wall appricot we have seen flowers already. Roads dry and dusty, which is earlier than has ever been known in this region. Without a change of temperature, peaches will blossom in two weeks, and many trees sooner. The robin and blue bird made their appearance on or before the 20th of March, and at present the forests are filled with songsters of various kinds, warbling their welcome to an early spring. ***

NEW ZEALAND SPINACH.

New Zealand Spinach produces fine pot greens in abundance; and the objection to its culture arises from its coming late in the season. This may in a measure be remedied by starting the plants in a hot bed. Twenty plants will afford a daily supply for a family. Near the south of England we are told it has become quite a weed; wherever it is once sown plants rise spontaneously. B.

☞ Some regret having been expressed at the appearance in the Farmer of March 2, of an article headed "The Friends," we publish the following extract of a private letter from an esteemed member of that Society: "I observed in the last No. of the Genesee Farmer an article headed *The Friends* which I was sorry to see. No good can be expected to your Journal from making distinctions between the different religious sects. For my part I do not believe the Society of Friends, is *particularly* entitled to any such compliments; nor that their neatness or industry is conspicuous above that of their neighbors. If you wish to be kind to us, let us alone."

ON GARDENING—No. IV.

GRAFTING.

This is the proper season when this operation ought to be performed. It is a mode of propogation applicable to most sorts of trees, and is adopted in order to conserve and multiply varieties which cannot be with certainty transferred to their offspring by seeds. It also enables us, in a much shorter period than could by any other means be effected, to substitute approved varieties of fruits on such trees as we have already in our gardens or orchards, but which have not equal merits. This art is by no means a recent discovery, but from what cause, or by what means it was discovered, is very unsatisfactorily accounted for. Chance is very likely to have originated the idea, in the same manner that the *browsing of a goat gave the first idea of pruning* the vine; and as a fire, which accidentally burned a rose tree, according to Acosta, (*Histoire Nat. des Indes*) gave the first idea of performing the same operation on that highly esteemed ornament of our gardens. It is an operation, however, that depends for its success upon the property that buds possess, of shooting roots downwards and stems upwards, and of forming new layers of wood instead of subterranean fibres.

The success which will attend the *operation* of grafting, will much depend on the giving proper attention on placing the bark, particularly the (*liber*) inner bark of the stock and cion, as exactly in contact with each other as possible, so that the line of separation of the wood and bark should, in both stock and cion, be accurately adjusted.

A grafted tree consists of two parts, the stock and cion. The latter, when inserted in a stock, identifies itself with it, and grows as if on its own natural stem and roots. My limits do not permit me to enter on the theory of grafting, but one part being so essential to success, deserves a notice. *The graft and stock must be species of the same genus, or at all events, genera of the same natural family.*

Cions should be shoots of last summer's growth, chosen from the *outside* branches of healthy trees; but if the tree from which the cion is taken be debilitated, it should be selected from the strongest shoots in the *center* of the tree. Cions should be gathered some time before the operation of engrafting is performed. In preparing the cion for insertion, it should be kept in mind that the middle part of each shoot makes always the best cion—this part being uniformly found to produce the best bearing trees.

Performing the operation.—There are various ways of performing the operation of grafting; but I shall confine myself to a description of such modes of grafting as are best adapted for general purposes, and are most easily performed, which are *whip grafting* or *tongue grafting*, *cleft grafting* and *crown grafting*.

Whip grafting is the practice best calculated for small stocks or small branches of trees, and is consequently the method generally adopted in nurseries for propagating fruit trees. This mode of grafting can be best effected when the top of the *stock*, and the extremity of the *cion*, intended to be united, are of an equal or nearly equal diameter. It is performed thus: Decide what height the stock is to be, then cut the stock and cion off obliquely at corresponding angles of an inch or more in length. Having performed this, cut off the top of the stock obliquely, or nearly horizontally; then make a slit nearly in the center of the sloped face of the stock, downwards, and a similar one in the cion upwards. This forms what is termed a tongue in the cion, and the same in the stock. Insert the tongue, or wedge like process, forming the upper part of the sloping face of the scion, downwards in the cleft of the stock. Should the stock be larger than the cion, particular attention must be paid in uniting the inner barks on one side. As soon as this part of the operation is performed, take a ribband of bass, (matting) the softest you can procure, and begin a little below the slit on the stock, tying it neatly and closely round the stock and graft, following the course of the sun, until you reach a little above the slit in the cion, when the matting must be neatly tied. The whole of this matting, and a portion of the stock and cion, must be covered with a composition of clay, or brick earth, to which has been added a fourth part of fresh horse dung, free from litter, and a small quantity of sand, with a small portion of cut hay, mixing the whole well together, and adding a little water; beat the whole on a board, or other hard substance, and as it becomes too dry, apply more water, turning it frequently over, beating and watering until it becomes flat and soft. This must be laid all round the bass or matting, about an inch and a half thick, or more in the center, finishing this application in an oval or globular form with the hands, which must be frequently immersed in water to prevent the mixture adhering to them. When all is finished thus far, dip the hands in water, smooth the whole over, closing the materials effectually, so that neither light, wet nor air can penetrate. This finishes the operation.

Cleft grafting.—This method and the following, will be best calculated for general purposes, where old trees are to be headed down and regrafted. The branch or stock is first cut off obliquely; then cut the slope part of the cut off horizontally near the middle of the slope; then, with a stout knife or a chissel, make a cleft of an inch and a half or two inches long in the crown downwards, at right angles to the sloped part. Great care must be taken in performing this operation, not to divide the pith in the center of the stem. Keep the cleft open by the knife or chissel, cut the cion with the grafting knife (which must be kept particularly sharp) into the form of a wedge, the cut an inch and a half in length, leaving it about the eighth of an inch thicker on the outer or bark side, bringing it to a fine edge on the side which will be the nearest to the center of the stock. Then insert it into the opening prepared for it, withdraw the knife, and the stock will then firmly close upon it, and keep it in its proper place. If the stock is very large, it may be sawed off horizontally; smooth the section, and two, three or more clefts may be made and cions inserted in each. Tie with bass and clay as directed for *whip grafting*.

Crown grafting is the last method of grafting which I shall here describe. The period for performing *crown grafting* should be later than that for either *whip* or *cleft* grafting, it being absolutely necessary for the sap to be so far in motion that the bark will easily separate from the wood of the stock when the graft is to be inserted, as the cion in crown grafting is not inserted *in* the wood, but *between* the wood and the bark of the stock. First cut or saw the stock or branch about to be grafted off horizontally, pare the top smooth; then, having the cion, cut it flat or a little sloping, an inch and a half in length, forming a shoulder at the top of the cut or slope. In performing this method of grafting, it is necessary to have a piece of hard wood, (six or eight inches long, and three-fourths of an inch thick at the thickest or handle end) or if there is much grafting it should be iron, which must be formed in a tapering shape with one side flat, the rest regularly rounded. Make an incision in the bark or rind of the stock about two inches long; then raise the bark from the stock by means of the above semi-wedged stick or iron, entering it at the top of the incision in the bark, keeping the rounded side outwards, and the flat side to the wood of the stock; having done this, insert the cion with the cut side next the wood, thrusting it down until the shoulder rests very closely on the top of the stock. If the stock is large, several may be inserted as directed for *cleft grafting*. Tie and clay as before explained.

I hope I have made these directions for grafting sufficiently explicit for those who are not acquainted with the operation. This is all I have aimed at, and shall therefore proceed to another subject which particularly demand an attention at this season.

ON PLANTING FRUIT TREES.

Where orchards or gardens are to be planted this spring, the sooner the operation is performed the better. There are several points connected with the mode of planting a tree properly, which deserve our attention, for on them our ultimate success will very much depend. The first is to use every caution and care to *preserve the fibrous roots entire*, on the removal of the tree. The next is forming a hole to receive it *more than sufficient* for the roots when extended. The third point is to dig the hole *considerably deeper* than it is to be when the tree is placed in it, and if the original soil is not good, fill the hole with a proper soil to such a depth that the tree shall be planted *no deeper* than it stood in its original situation. This latter is a most important point in the planting of a tree, and should never be departed from when planting apples, pears, plums, peaches, nectarines, cherries, quinces, or such trees as belong to this tribe. For vines it is immaterial, as the vine will emit fibres from every eye or bud, thereby converting every part of the vine, which may be buried in the ground, into a part of its root. I again repeat the utmost attention should be paid to this important point. I insist on it the more, from having frequently seen gardeners and others treat it with indifference.*

* I trust I shall not be accused of presumption in finding fault with gardeners or others on this point, but I am so convinced, from practice and observation, of the injuries which result from *deep planting*, that I considered it proper to advance my opinion in strong terms on the subject; although I have, at a former period of my life, lost the opinion of individuals as to my being a gardener, by adhering to shallow planting. The manner of my doing so was as follows: During a sojourn among the *Creek Indians*, within the limits of the state of Alabama, in the spring of 1828, at the house of the U. S. Agent to that tribe, I one day discovered a most beautiful and symmetrically formed Cupressus thyoides (white cedar) on the banks of the river *Chatahootchie*. On directing the attention of the agent, Col. Crowel, to this handsome specimen, he determined to remove it to a conspicuous place

The next point to be attended to, is to place the tree in its proper place, keeping the same side toward the sun as had been when growing in its former situation; then *distribute the fibrous roots regularly* around the stem, placing them as far as possible in a horizontal position, or with a slight inclination downwards. In placing the soil round and among the fibres, it should be regularly *shaken* off the spade, giving at least half a dozen shakes to each spade of mold. Planting should be attended with copious waterings, from a watering pot with a rose, *during the operation*, by no means *immediately after it is performed*. After the last watering has been applied, allow it to remain until the earth has absorbed the water; then cover with soil to the proper depth; this will leave the soil on the surface open, and prevent it from forming into a crust, which is very injurious to a newly planted tree.

I am, very respectfully,
ALEXANDER GORDON.

Rochester Nursery, Main-st., April 1, 1833.

HIGHWAYS—No. II.

Why are roads which lead along the banks of deep gullies generally firmer and drier in wet seasons than other roads? Because the vegetable mold or soil is not so deep in such places, the winds in past ages having swept off the leaves. The wheels run on the subsoil, which in most of our country is rendered compact by small stones and gravel. But there are other reasons: There is commonly descent enough in the direction of such roads, to carry off the water freely; and not having been *turnpiked*, but left flat, the *ruts* are sooner filled up on the return of dry weather.

The present plan of making roads in this country, appears not to be the best. *I dislike the whole system of turnpiking*. It is most employed on such soils as are least adapted to its operation; that is, on low mucky lands. As if these tracts, so soft and so retentive of moisture, were not bad enough, as much more from the sides of the road, is piled on the top. There is some mitigation of the evil when the hard subsoil is also carried up by the scraper, but it is only a mitigation. The foundation of the road is a bad one, and most of its materials are of the worst kind. In many years, if care be taken to throw on nothing but subsoil, the evil may be covered up; yet in a road which has been laid out and worked more than thirty years, I observed last summer in a wet time, that the wheels cut through this crust, and brought up the black muck from below.

If we want to have roads in our level lands, as easily kept in repair as those which lead over the natural surface on the banks of gullies, we must apply our labor to produce the same state of things. Instead of scraping *up* the mucky soil into a broad ridge to travel over, we must scrape it *off* beyond the limits of the road, and lay bare the hard solid earth. Let this be flat and smooth, with a furrow on each side, well cleared out, and we shall have a road for wet weather as well as for dry weather, for sleighing time as well as summer, because in such track the snow would settle. At present, when it falls with a brisk wind, we have always the *least* snow where it is *most* wanted. VIATOR.

in his own garden. I was to superintend the operation. Several Indians and negroes were assisting. The work went on very satisfactorily in taking up the tree, and removing it with difficulty several miles; but when I placed it in its new abode, and commenced placing the fresh soil among its fibres, I was astonished at the gesticulations of a venerable old Indian, with the words "*courst tcha, courst tcha*," (no good, no good,) very significantly pronounced. Desirous of learning the cause, I inquired what was my error in the opinion of this son of the forest; when, through an interpreter, I found that some years previous, this same Indian had witnessed a similar operation, and although the tree was planted so deep, which depth he explained by extending his arm in a horizontal position, still *it* died. How then was it possible for mine to survive? But I proceeded in my own way; however, I found afterwards, in so doing, after this warning, my knowledge of transplanting trees, was considered ever after, by the old man in particular, as "*courst tcha, courst tcha*."

THE USE OF PLASTER.

Some time since I made an inquiry through the medium of the Farmer in regard to Plaster of Paris, stating that some of the farmers in this section of the country, had abandoned the use of it, they having formed the opinion that it was injurious to their lands. I was in hopes that the subject would be discussed in the columns of the Farmer. But so far I have been disappointed The subject is certainly one wherein many of our farmers must feel much interested. Then let the subject be examined and thoroughly discussed—let facts be laid before the public; for if plaster produces the baneful effects that some have ascribed to it, it is time, and high time too, that the use of it were totally abandoned. These considerations induce me again to bring forward the subject, and briefly give my own views in regard to it.

For many years past I have made use of plaster on my lands, and, after several years experience, I have come to the conclusion that it may be used with great advantage to the farmer. Now, in the use of plaster, I would not have manure at all neglected, for I am sensible that barn-yard manure is the great moving power to produce vegetation on the farm, and consequently no other manure or stimulant should be put in competition with it; yet that other substances may be used that will greatly increase vegetation, and when so increased will, of course, produce a greater quantity of manure. For instance, let us suppose a farmer has ten acres of grass land so worn out that it will only yield five tons of hay, or only half a ton to the acre. Now perhaps his ten acres, with the use of plaster, may be made to produce twenty tons of hay, or two tons to the acre. Let us again suppose that every ton of hay will make two loads of manure, and thus, instead of ten loads of manure, with the aid of plaster we have forty. Now let this manure be again returned to the land, and farmers will not complain of their lands becoming impoverished.

Prejudices and errors have been imbibed in regard to plaster in consequence of the most injudicious use of it. I say injudicious, because large quantities have been sown to the acre, and monstrous large crops of clover, &c. have been taken off for a few years, until the land has become exhausted,—then ploughed up and planted without the aid of manure; and because a large crop was not procured, why, forsooth, the plaster had ruined the land; when if the manure that had been produced from the large quantity of hay had been returned to the land, a large crop would have been the result.

Again, some have considered plaster as a substantial manure, and thus have used large quantities of it, vainly supposing that their lands would increase in richness year after year by its use, without the aid of manure. This is erroneous. Plaster does not possess the properties of manure; but acts only as a powerful stimulus in producing vegetation. Neither do I suppose that its influence has any deleterious effects whatever.

In the application of plaster, no definite rule can be laid down but that, under some particular circumstances, must be departed from. But in regard to grass land, I have adopted the following as a general rule: After I have stocked down a field to clover and timothy, and the spring previous to mowing, I apply a half, or three-fourths of a bushel to the acre,—two years after, say one bushel to the acre;—let my land lay in grass from four to five years. Plough up in autumn—the following spring put on manure. Plant corn or potatoes—then follow wheat, oats, or other grain—then stock down again, and apply plaster as before. Thus the same field, in the course of six or seven years, receives two dressings of plaster and one of manure. It will be observed that I only apply a half, or three-fourths of a bushel to the acre the first season. I formerly used a bushel or more, but this quantity generally made the grass grow so large and rank, that much of it would fall down before it was ready for the scythe. Again, care should be taken to have the plaster applied to the land early in the spring, before the ground becomes very dry, for I have noticed, when applied in a very dry time, that it has little or no effect.

Let the above method be adopted, and I venture to say, that little complaint will be heard about plaster injuring the land. The truth is, that nearly every person with whom I have conversed in regard to the subject, and who have abandoned the use of plaster, acknowledge that they have paid but little attention to barn-yard manure, and have used but little, if any, manure on those lands where they had applied plaster. That plaster may be successfully used without the aid of manure I freely admit. But then it will be necessary to turn in a good clover ley once in four or five years.

There are other subjects relative to plaster, such as the proper soils suitable for receiving it—various crops that may be increased by its application, &c., which I am unable to examine at the present time, but may, perhaps, at some future day. BENJ. HODGE, Jr.

Buffalo Nursery, March, 1833.

☞ We hope Mr. *Hodge* will continue his remarks on the use of Plaster, as it is a subject which has not, we think, been sufficiently attended to by farmers generally. Since the above was in type, we have received a communication from *York*, in answer to the call made by Mr. H. in his first article, for which we shall endeavor to make room next week.

☞ The Royal Academy of Sciences of Lisbon has lately elected Peter S. Duponceau, Esq. of Philadelphia, to be one of its members; and the diploma of this highly estimable citizen has been transmitted to him by the Viscount of Santarem, minister and secretary of state for the department of foreign affairs at Lisbon, through the charge d'affaires of Portugal at Washington, the Commandeur Torlade d'Azambuja.

New & desirable Flower-Garden Plants.

From M'Intosh's (British) Flora and Fomona.

The following plants we would particularly recommend as deserving a place in every good flower-garden, viz :— [1] *Salvia cardinalis*, [2] *Verbena Melindris*, [3] *Eccremocarpus scaber*, [4] *Lophospermum scandens*, *Salpiglossus*, all the species; the newly introduced [species of] *Penstemon*, *Lupinus*, [8] *Calceolaria*, *Potentilla*,— *Geum coccineum*, *Geum Quellyon*, [12] *Maurandia Barclaiana*, *Mimulus moschatus*, &c.

Of these, the third, fourth, and twelfth, are climbing plants, and suited for training against walls, pales, or rustic supports. They should be propagated by cuttings in autumn, and kept in pots in the green house during winter, and planted out in April or May. The first, second, and eighth, average two feet in height, and require the same protection. The remainder are sufficiently hardy to stand in the open borders. Of the genus *Lupinus*, several are *annuals*, and should be raised from seed in the spring. *Salpiglossus picta*, *atropurpurea*, *staminea*, *and Barclaiana*, are hardy *biennials* or *perennials*, and may be propagated from seeds which should be sown in April and May.

Remarks by a Correspondent.

The following particulars respecting some of those plants, are selected from the same work. It has been gratifying to observe that *seeds* of many of the kinds recommended, are now on sale *for the first time in this country* by Alexander Gordon at the Rochester Nursery on Main street. I hope our florists will take advantage of this opportunity to embellish their gardens.

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Calceolaria corymbosa has yellow flowers delicately striped near the orifice with red, and dotted with the same bright color in other parts. It is a native of Chili; grows from 1 to 2 feet high; flowers from April to August; and thrives in peat and loam. It is a biennial, and may be propagated by seeds or by dividing the roots.

The temperate regions of Chili and Peru are said to abound in many splendid species of this genus. The prevailing color is yellow. They are all readily increased either by seeds or cuttings; and most of them are well calculated for planting out in the borders of the flower-garden during the summer months. As green house plants, they are all peculiarly interesting and cannot fail of obtaining admission into every collection where there is the least pretension to a taste for plants.

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Eccremocarpus scaber, also called *Calampelis scabra*, is a native of South America. The flowers are somewhat tabular, finely shaded with red and yellow, and grow in racemes. The plant is a half shrubby perennial, growing from 6 to 20 feet high, and flowering from July to October.

It is a rapid growing plant, which in its native country is found running over the hedges and bushes, and flowering nearly the whole year. It is propagated by seeds which are produced in tolerable abundance, but do not vegetate sometimes till the second year after sowing.

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Geum coccineum is supposed to be a native of Chili. It grows from 1 to 2 feet high with scarlet flowers in June and July. The native country of this *extremely beautiful plant*, is not correctly known. It is of the easiest culture, seeding abundantly and increasing at the roots. Perennial.

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Verbena Melindris is a native of Chili and Buenos Ayres, grows 6 or 8 inches high and flowers from June to September. It is perennial; and propagated from cuttings. The flowers bright scarlet, arranged into a corymbose spike.

This, of all the genus is *the most splendid*, and the most deserving the attention of the flower gardener. The facility with which it is increased by cuttings; and naturally when planted out, by rooting from the prostrate stems, has already rendered it common in all the best gardens in the vicinity of London. For the decoration of the green house, conservatory, and drawing room, few dwarf growing plants can exceed it; and although it requires the protection of a frame during winter, it is among the greatest acquisitions that the flower-garden has recently received.

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Lophospermum scandens, called also *Besleria scandens* is from Mexico. It is perennial; grows from 5 to 20 feet high, with flowers varying from purple to a rose color, which appear from July to October. It is propagated by seeds or young cuttings.

As a green-house, or conservatory climber, this plant has few equals; and to the list of flower-garden climbers, it also adds a valuable addition.

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Maurandia Barclaiana is also from Mexico, grows from seeds and cuttings, 4 to 10 feet high, and flowers from May to December. Corolla nearly three inches long, deep purple, tabular-bell shape. For green-house and conservatory climbers, they are admirably adapted, being rapid in their growth, and continuing long in flower. During the summer months they may be planted out in beds in the flower-garden, or trained to trellises with advantage. It is perennial.

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Lupinus. So late as 1826, we find only *fifteen* species of this genus enumerated in Sweet's Hortus Britanicus, as being in cultivation; but in the course of the following year, an additional *fourteen new and valuable species*, was made to this list by the indefatigable exertions of Mr. David Douglas, a botanical collector, employed by the Horticultural Society of London, in exploring the rich vegetation of the almost untrodden territories in the vicinity of the river Columbia, in the north western districts of North America.

Professor *Nuttall* says in his Introduction, "The trees and shrubs of cold climates retain the necessary moisture of their vitality at temperatures when all other liquids freeze." p. 223.

If by this moisture is meant the sap, the passage is erroneous. There is not a winter of the Genesee Country in which the sap of the maple, the beech, and the basswood is not frozen very hard; and the labor of cutting wood at such a time is very much increased, as every farmer who cuts his own fire-wood, well knows. Nor can it be said that it is different with evergreens. the hemlock (*Pinus canadensis*) for instance, freezes as hard as the basswood.

A Practical Gardener.

Mr. Editor—Will you or some of your correspondents please to inform me how to prepare the soil for Radishes? I have tried a number of experiments, but all to no effect, as the worms spoil them.

I would also inquire if you know any way to prevent the striped bug from eating vines? I have hit upon no plan to preserve my cucumbers, except by putting square boxes over them, covered with Millinett, and that mode leaves them rather tender when the box is removed.

My cabbages suffered much last season, from the ravages of a small black bug or fly. I sprinkled dry ashes and plaster on them, but to no purpose. Please inform me of a remedy if you know any.

C. of Starkey.

AN IMPROVEMENT SUGGESTED

IN THE PLAN OF CULTIVATING THE BEE IN AN EXTENDED HIVE.

The plan of Ulmus, of cultivating the bee in an extended hive, with several apartments, I think a good one; but I would offer what I consider an improvement, the originality of which I do not claim to myself, for it was suggested to me by reading an account of the construction of a hive by an English apiarian, Mr. Fluish, and also an account from an almanac, two or three years since. The improvement of Mr. Fluish consisted in such a construction of the hive as to permit the taking out of honey at the top whenever it was wished. That in the account in the almanac, consisted in the forming of the entrance in such a manner as to prevent the mischief of the bee moth. I combine these improvements, besides suggesting one which I have never seen elsewhere recommended.

I adopt the form of Ulmus' long hive in the main. I can see, however, no particular advantage in having the top wider than the bottom, if there be rods to support the combs. I suppose the reason of adopting this form in hives was to obviate the necessity of sticks, by the honey resting on the sides in the form of a wedge. The rods running through a hive render the operation of extracting the honey difficult. If, therefore, they can be dispensed with, one important point is gained. The top of the box I would have declined, as well as the bottom, a few degrees, in order that the condensed vapor, which arises from the bees, might pass down on the inside of the declined top, and not fall on the bees. Again, instead of lids at the bottom of the box, I would have them at the top, over each apartment, and the bottom nailed tight. At the bottom of the box, in front of each apartment, I would fix a tube, for the entrance of the bees, ten or twelve inches long, four inches wide, with an orifice two inches wide, and one-third of an inch deep, running from the hive out through the side of the house in which the box is placed. The lids over the several apartments I would have exactly of the width of the box, their ends meeting and forming a close joint over the partition boards; fastened on the front side of the box with hinges, and on the back side with staples and hooks. These lids should have cleats screwed on to the ends to keep them from warping, and should fit close upon the top of the box. To prevent the bees attaching their comb to the lids, just inside of the lids I would form a rack of narrow strips of boards, about one and a half inch wide, and a half an inch thick, running across the hive, and the ends resting upon a shoulder made on the edges of the sides and partitions of the box at the top, by rabiting down the edges three-fourths of an inch and one-fourth of an inch deep, which, allowing the narrow strips of boards to be a half an inch thick, there would be one-fourth of an inch space between the rack and the lid. These strips I would lay on about one-fourth of an inch

apart, and cover them with millinet fastened down in such a manner as to prevent the bees coming up between the narrow strips of boards, but so that it may be easily raised. The bees will attach their comb to these strips of boards lengthwise, if they are properly placed. The millinet being an *unstable* foundation, the bees will not attach their comb to it; it will prevent their coming up through when you raise the lid, and enable you to inspect the interior of the hive by looking down through it. Whenever it is desired to take away a portion of the honey, we have only to open the lid of any one of the apartments which is stored with honey, turn up the millinet, take up one or more of the strips of boards, remove the honey, and replace them again, that the vacancy may be replenished. I have observed that in the common board hives the bees do not build their combs parallel with the sides, but obliquely,—almost diagonally. *If this is their general method*, it will be necessary to lay the narrow strips in this oblique manner, that the combs may not cross them, but each strip have its separate sheet of comb. I am confident this is the easiest way the honey can be taken from the the box. Besides, there is this important consideration to recommend it: it enables you to remove, from time to time, all the old and black combs, which, after a few years, as I learn from experienced bee cultivators, the bees will not use at all, either for breeding or for storing honey; and thus you may keep your hive replenished with new and wholesome comb.

There is yet one improvement more. As the bee perspires a great deal, and as this perspiration when condensed and falling on the bees is very injurious, I would contrive to ventilate the hive to carry off the vapor as it rises; or, if condensed against the top of the hive, to lead it off without touching the bees. This I would do by one or more small tubes in each apartment, leading from the rabited shoulder at the top, on which the ends of the narrow strips of boards rest, down the outside of the hive; the ends of the tubes covered with perforated tin, or a wire screen, to keep the bees from entering it from the inside of the hive, or the moth and other insects from the outside. These tubes would receive the condensed vapor of the bees as it run down the declined lid, and carry it off, besides ventilating the hive.

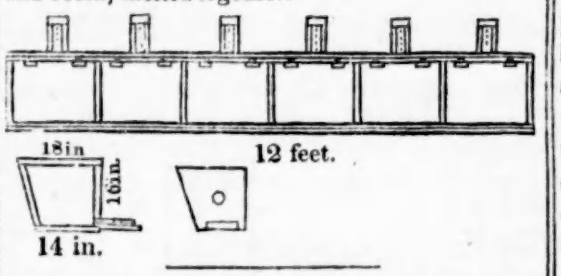
There may be holes in these lids, agreeable to the plan of Ulmus, over which boxes may be placed to receive the surplus honey. Immediately under these holes, a portion of the millinet may be removed, and the space surrounded by some thin bits of board, on which the lid will shut down close, to prevent the bees spreading over the whole rack, and fastening it to the lid.

It is my intention to construct a hive after this plan, twelve feet long, about sixteen inches wide at the top, twelve inches at the bottom, and fourteen inches deep, having six apartments of two feet each, separated by partitions similar to those of Ulmus, having a passage at the bottom, and through the middle, from one apartment to the other, which are to be stopped until the bees increase so as to need the adjoining apartments. Over one of the middle apartments I shall place a hive of bees this winter. This long hive is to stand in my shed loft, against the south side. The result of my experiment I hope to be able to communicate hereafter. I intended, when I commenced this communication, to have given an account of Mr. Fluish's hive, and the one described in an almanac, which suggested some of these improvements to my mind, to show that they have the testimony of experience to recemmend them; but this I will do in another communication.

W. W. B.

Hammond's Port, Feb. 12, 1833.

P. S. As the top of this box is the only place where the bee moth can find a deposit for her eggs, (except she enter the tubes which serve as the entrance of the bees,) I would recommend to rub in the crevices about the lids a little bees-wax and rosin, melted together.



From President Madison's Address before the Albemarle (Vir.) Agricultural Society, 1819.

WOOD LOTS.

"Estimating the crop of wood yielded by an acre, at twenty cords, the period of reproduction at twenty years, and the average number of cords annually consumed in a fire-place, including the culinary consumption at ten cords, *every fire-place on a farm will require ten acres* for a permanent supply of fuel. For the other necessities of a farm several acres more ought to be added.

"An estimate in a very sensible publication entitled "The New England Farmer," makes *seventeen acres necessary for a fire-place.* The winters there are longer, and the climate may be less favorable to the quick growth of trees. But their houses are generally closer than with us; to say nothing of a more judicious management than can be enforced on our farms."

Any facts communicated to the Genesee Farmer relative to the *productiveness* of *Wood Lots* in this district will be very acceptable to

An Inquirer.

I wish to be informed on the subject of leached *ashes* as a manure on sandy land: how far they will bear carting; how they should be applied on land to be planted with corn, or to be sowed with oats or peas; and whether such ashes are the less valuable for having lain in heaps about the ashery three, four, or five years. Probably from one to three thousand bushels are lying as above, three-fourths of a mile from my farm. I should be glad to see something on this subject in the Genesee Farmer. Also, how, or at what price, can ground plaster be obtained at Rochester per ton.

W. P.

☞ Plaster is not, we believe, kept on sale in this village. Will the proprietors of the Plaster beds in Wheatland please inform us at what prices the article can be delivered on the banks of the Canal?

Mr. Editor—I wish to inquire the best way to *bring to* low black ash land. An answer through the medium of the Farmer will much oblige

J. M. S.

Mr. Editor—One of your subscribers wishes to be informed, through the medium of the Genesee Farmer, where he can obtain the best blooded, or real Devonshire cattle. He wishes to stock his farm with this kind of cattle.

AUDUBON'S ORNITHOLOGY.

The Legislature of Massachusetts have passed a resolution to purchase a copy of the great work of the eminent American ornithologist, Audubon, for the use of the library of that commonwealth, and we are gratified to learn, that a resolution for the same purpose has been introduced in the Senate of this state. The New-York American of the 29th ult. says:—"Mr. Audubon, whose unequalled work on the Birds and Plants—for it truly embraces the history of both—of the United States is now in this city. He has with him many of his original drawings, from which the engravings for the book are made, and will, we hope, afford an opportunity to the public of seeing them, and thus effectually awaken their interest in a truly national work. No state, or college or other public library, should be without it; and every individual who can afford the substantial and enduring luxury of a well chosen private library, should possess the publication—costly though it be—yet more valuable than costly."

INQUIRIES.

We would call the attention of the readers of the Farmer to the several inquiries made in this number, and solicit answers from those whose experience will enable them to render the desired information.

MONROE AGRICULTURAL SOCIETY.

A meeting of the Board of Managers of the Monroe Agricultural Society will be held at the Court House in Rochester on *Saturday the 13th of April* at 1 o'clock P. M. for the purpose of amending the Constitution, making out a list of articles and animals on which it shall be thought advisable to offer Premiums, and for the purpose of transacting such other business as may be necessary for the advancement of the interests of Agriculture, Horticulture, and the Household Arts. A punctual attendance of all the members of the board is earnestly solicited.

WM. GARBUTT, *Prest.*

N. Goodsell, *Sec'y.*

Rochester Prices Current.

Wheat, per bu.	91	Apples,	37a63
Flour, per brl.	5 00	Lard, cwt.	8 00
Pork, mess, brl.	14 00	Cheese do	6a8 00
do prime do	10 00	Butter	14a16 00
Beef per cwt.	2a3 00	Hams do	6a7 00
Oats	38	Pot Ash, cwt.	3 50
Corn	69	Pearls,	3 75a4 00
Rye	75	Hides, cwt.	5 00
Barley	50a56	Sole Leather,	19a22 00
Hay, per ton,	10a11 00	Harness do	25 00
Grass Seed,	1 25	Upper p side,drs'd	2 25
Potatoes,	25	Bundle do	3 00a3 50

BUFFALO NURSERY.

THE subscriber offers for sale, on the most reasonable terms, a very general assortment of fine, thrifty FRUIT TREES, of vigorous growth, and choice varieties of Fruit, consisting of Apple, Pear, Plum, Cherry, Nectarine, Quince and Almond, &c.

Among his *Ornamental Trees*, are Yellow Locust, Glutinous Locust, Three Thorn Acusia, Weeping Willow, Balm of Gilead, Mulberry, &c.

On the opening of canal navigation, he will receive an additional supply of Grape Vines, Rose Bushes, Flowering Shrubs, &c.

BENJ. HODGE, Jr.

Buffalo, March 27, 1833. 14

A NEW DRINK.

From the Commercial Advertiser.

[Justice to the author of the following communication, requires us to say that it was written off hand, immediately after the appearance of the article in the American, to which it is a reply.]

To the Editors of the Commercial Advertiser:

I saw last evening in the American the following:—

A new drink.—A correspondent sends us the following extract of a letter:

"By the way, do the people "down East" know that an excellent drink can be made of the sap of *Birch trees*? You may if you please, communicate it to some newspaper. It is made like wine."

The next best thing to telling that sap of Birch trees makes an excellent drink, is to let us know the process of making it—tho' to be sure, they are 'cute enough "down East" to find any thing out.

Not being acquainted with the editor of that paper, I have sent an answer to the inquiries there made, to you.

The very mention of the beverage is reviving. The birch-tree from which the sap is taken for this purpose is the black birch, but yellow or white birch will answer the purpose. The birch of either species abounds more in sap than any other tree of the American forests. An hundred gallons of sap may be taken from a good sized tree in twenty-four hours.* Sixteen gallons of this sap contain about a pound of sugar. It contains a large quantity of fixed air, and is a delightful drink as it runs pure from the tree, and it may be used as freely as the Saratoga waters with safety. The drink is highly exhilerating. Beer may be made in various ways from this sap, but the best I ever drank was made in the following manner:

The trees were tapped in March, as the snow was wasting away, and tubs placed under them to catch the liquor. The crochets were fixed, the lug-pole extended, and the large kettles swung—the sap was put in them, and the fire kindled, and the sap was boiled down to about one half of the natural quantity—an half pint of the essence of the spruce, an handful of chickenberry leaves, with a small quantity of sassafras or sarsaparilla is allotted to a barrel; and if you wish it to be super-excellent, put in as you turn it into the cask, about two quarts of maple syrup to thirty gallons. A few days after the casks are put into the cellar, give them a slight vent while it is in a gentle ferment. The casks should be in a cool place, that the fermentation should be slowly carried on; when this is over, bung it up tight, and in May it will be in the highest perfection.

No drink ever used is more delightful to the taste, or more healthy. It purifies the blood—sits well on the stomach—and has no intoxicating effect. Had Bacchus known how to make birch-beer, he would have thrown down his wine cup and adhered to the beer barrel. The writer of these rules for brewing the eastern birch-beer, has tasted of the vintages of many nations;—has drunk from the leathern bottle of Shiraz, "the flaggon of Rhenish;" the black glass containing Mountain Malaga,—the clear, inspiring looking taper necked bottles of champaigne, but would forego them all for the pure, well made, well kept cask of birch beer. It is remarkable for clearing the head—and for warming the heart. The New Hampshire troops had been swigging at it when they heard of the Lexington fight and had a few barrels left when they went on to Bunker Hill—they drank but little else during the whole Revolutionary conflict—and what people ever were braver?

Stark drank his tankard of beer until he was turned of ninety, and old Samuel Welsh, of Bow, refreshed the writer with a mug of fine birch beer in a warm day,—drinking freely of it himself, then in his hundred and twelfth year. Is it not conducive to long life? It must be confessed that some of the rising generation in that region, although they loved it dearly, thought it was not so fashionable as brandy; and did not think of offering it to a visitor; but it is to be hoped that this modesty has become quite extinct—and that in some future day the excellence of the Birch will be sung with the virtues of the Vine; and that the genius of Temperance will adopt the Birch tree as an emblem of his complete triumph over all *the Fiery Spirits of the Distillery*

A YANKEE.

* "A man much employed in making maple sugar, found that for twenty days together one of the maple trees which he tended discharged seven gallons and a half each day. A large birch which was tapped in the spring ran at the rate of five gallons an hour when first tapped; and during the season of the running of the sap, it discharged sixty barrels in one spring. The consequence of this waste of the juice was the death of the tree, the ensuing summer.—*Vide The Natural and Civil History of Vermont by Samuel Williams, L. L. D., and printed at Walpole, by Isaiah Thomas & Co.*—1794—*p.* 75.

METEOROLOGICAL TABLE,

Kept at Spring Arbor, Michigan, for Jan. 1833.

Days	5 A.M. Ther.	5 A.M. Wind	5 A.M. Sky.	1 P.M. Ther.	1 P.M. Wind	1 P.M. Sky.
1	5	W.	cl'dy rain 6-10	50	S. W	clear.
2	33	S. E.	cloudy.	45	S. E.	clo'dy, rn. 1-20.
3	35	S. E	misty 1-20	60	S.	misty 1-20.
4	59	S. W.	cloudy.	60	S W	do 1-10.
5	57	S. W.	do rain 1 20.	62	W.	cloudy.
6	38	S. W	fair.	47	W.	fair.
7	25	N. W	rain 1-20, sn. ½	34	S. W	do
8	27	S. W.	fair.	31	W.	do
9	27	S W.	snow 1½ inches	31	W.	snow sqls. ½.
10	6	N. W	snow ¼ clear	46	N. W	fair.
11	1	S	cloudy	46	S. W	do
12	13	N. W	snow ¼ inch	49	S. W.	cloudy.
13	14	S W.	clear.	36	S. W.	fair.
14	17	W	do	27	W.	clear
15	26	E.	cloudy.	34	E	snow 1 inch.
16	19	N. W	snow 2½ inches	46	N. W	do ¼ in.
17	4	W.	snow ½ inch	44	W.	fair.
18	20	S. W	*cloudy.	32	S. W	cloudy.
19	26	S. E.	fair.	38	S. W	fair.
20	41	S. W.	do	44	S. W	do
21	35	S.	cloudy.	43	S. E.	do
22	32	N. E	do	38	N. E	cloudy.
23	35	N. E	do	41	N E	do
24	34	N. E	do rain 1-10.	35	N. E.	do. rain 1-10.
25	23	N W.	snow ½ fair†	30	N. W.	fair.
26	14	S. W	clear.	27	W.	do
27	17	S. W.	fair.	28	S. W.	cloudy.
28	18	W.	snow ½ inch.	29	E.	fair.
29	25	S. E	fair.	46	E.	do
30	34	N. E	cloudy.	40	E.	cloudy.
31	22	N.	fair. windy	24	N. E	fair.

Mean thermom. 31.1. Rain 1 1-10 in. Snow 7½ inches.

* Snow 5in. deep. † Snow gone.

LUCERNE, (Medicago Sativa.)

THE subscriber having been liberally patronized in the importation and sale of this valuable Grass Seed, begs leave to inform his friends and customers, and agriculturists in general, that he has received a fresh lot and a good supply of last year's growth, and of the first quality. The high reputation which this French clover has sustained in this country, for a few years past, and from its early and rapid growth, is enough to introduce it into general use. Enough has already been said to induce every farmer to test its value and virtues.

Imported and sold, wholesale and retail, by

JAS. C. CHURCH,

37 *Madison-street, New-York,*

where a large and good supply of *Burr Stones* can always be found of superior quality and reasonable price. mar 30-f3t*

ENGLISH GARDEN SEEDS.

EVERY variety of the most approved sorts of culinary Vegetables, and Ornamental Flower Seeds, directly imported from the first rate seedsmen in England, to be had at the Rochester Nursery, and at New-York prices.

mar 23 ALEX. GORDON.

FRUIT TREES.

THE subscriber has on hand 152 sorts of the very choicest cultivated Apples, of particularly handsome growths, and 70 sorts of the most esteemed varieties of European and American Pears Also, an extensive assortment of Plums, Peaches, Cherries, &c. at the New York prices.

☞ *CIONS* of the above extensive assortment of Fruit Trees may be had on application at the Rochester Nursery, on the most reasonable terms.

ALEXANDER GORDON.

Rochester Nursery, March 23, 1833

FOR SALE.

IMPROVED *Short Horned Durham Cattle*, for sale by the subscriber; also the crosses from Durham and Devon, raised from stock imported from England by some of the most celebrated breeders in the United States.

Terms liberal. The animals are from six months to three years old, Bulls and Heifers—Some of the Heifers are now with calf by the celebrated Durham Bull, *Admiral*, surpassed by no other in America The animals may be seen at the stables of the subscriber.

Communications by mail promptly attended to

L. JENKINS.

Canandaigua, Ontario co., N. Y., } mar 30-f3t
March 14, 1833. }

ALBANY SEED STORE.

C. BUEL & CO., having bought the Seed Establishment of W. Thorburn, beg leave to inform, that the business will be continued at the old stand, No. 347 N Market street, near the Post Office, Mansion House, and City Hotel.—They have on hand a supply of fresh GARDEN SEEDS, of the best kinds, and intend to keep at all times an assortment. Also, GARDENERS TOOLS, as spades, shovels, rakes, lines, knives trowels, saws, &c.; and many FIELD SEEDS as lucern, clover, and other grasses; mangold wortzel, ruta baga, and the other varieties of turneps; green house Plants, split peas, barley, oat and rice meal, bird seed, &c. A small assortment of horticultural and agricultural books

Orders for trees and plants, and for American Horticultural and Agricultural Books received and forwarded,

Cut Flowers or Boquets, furnished on short notice. Gentlemen wanting Gardeners, and Gardeners wanting places, may send their applications to the Store. *Albany, March* 8.

Fresh Garden Seeds.

THE subscribers respectfully inform the public that they have entered into partnership in the seed business, and they assure the public that nothing shall be wanting on their part to give the utmost satisfaction to those who may favor them with their patronage. It is the intention of the subscribers to erect an elegant Greenhouse in connection with this establishment, where a choice collection of new, rare, and beautiful flowering plants will be supplied from the New-York Botanic Garden upper end of Broadway; and also from the same establishment the best sorts of Flowering shrubs, Garden roses, Hardy perennial plants, Double Dahlias, Chinese Pœonias, Grape Vines, Gooseberries, Currants, Raspberries, Trees for the streets, &c. &c. They have just received from London, a large importation of garden and flower seeds the growth of 1831, such as Cabbage, Cauliflower, Brocoli, Radish. Pease. Grass Seeds, &c. &c.; and also from Glasgow, Hawthorn quicks for Hedges, Red moss, White moss, and White Provence roses. The trade supplied on the most reasonable terms, and all orders by mail or otherwise, will be punctually attended to. SMITH & HOGG,

New-York, May 1832. No. 388, Broadway.

NATIVE AND FOREIGN GRAPES.

ISABELLA, Catawba, Winne, Black Hamburgh, &c., &c., to be had in any quantities good rooted plants, one, two and three years old, and cuttings in large and small quantities, at the Rochester Nursery on Main street.

mar 23 ALEXANDER GORDON.